Amendments to the Drawings:

Applicants respectfully request that the prior amendment of FIG. 2C submitted in the response filed October 26, 2006 be withdrawn.

REMARKS/ARGUMENTS

Office Action Summary

Claims 1-31 are pending. Claims 1-13 and 21-31 were previously withdrawn pursuant to a restriction requirement.

The Fig. 2C amendment which was submitted in the 10/26/06 response is objected to for introducing new matter.

Claims 14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over various combinations of Applicant's Prior Art (APA), U.S. Patent No. 6,147,381 to Hirler et al. (Hirler), U.S. Patent No. 5,793,064 to Li (Li), U.S. Patent No. 4,987,098 to Nishiura et al. (Nishiura), U.S. Patent No. 5,008,720 to Uenishi (Uenishi), European Patent Application No. EP 1193767 to Matsudai et al. (Matsudai).

Claim amendments

Previously withdrawn claims 1-13 and 21-31 are herein canceled. Applicants intend to pursue these claims in one or more divisional applications. Claims 14 and 15 are amended to more clearly set forth the invention. Claim 17 is amended to bring claim 17 into conformity with claim 14 as amended. Claim 19 is amended to correct an antecedent problem. Dependent claims 32-33 are newly added.

Support for the claim amendments and for the newly added claims can be found throughout the specification, drawings, and original claims. No new matter is believed added.

Objections to the drawings

The FIG. 2C amendment submitted in the response filed 10/26/06 is objected to for introducing new matter. To overcome this objection, Applicants respectfully request that the prior amendment of FIG. 2C be withdrawn.

Rejection of claims 14-20

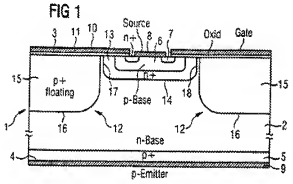
Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Hirler. This is respectfully traversed for the following reason.

Claim 14 as amended distinguishes over APA and Hirler taken singly or in combination at least by reciting:

> where the first well region and the second well region have a substantially same depth in the drift region ...

The Examiner indicates that the claimed "first well region" is shown by region 108 in Fig. 2A of APA, and the claimed "second well region" is shown by region 15 in Fig. 1 of Hirler. Fig. 1 of Hirler is reproduced below for reference.

FIG 1



As shown in Fig. 1 and explained by Hiler, p+ floating regions 15 are disposed on each side of shielding zone 13 (see col. 3, lines 64-67). Shielding zone 13 is n+ doped and has a distinctly higher doping concentration than inner zone 2 surrounding it (see col. 3, lines 61-64). Embedded within the shielding zone 13 is p-doped base zone 6 (col. 3, lines 45 and 61).

At col. 5, lines 2-13, Hirler states:

> "What is essential in this case is that the non-connected, floating regions 15 of the opposite conduction type have a penetration depth which is distinctly greater than the penetration depth of the shielding zone into the inner zone. The purpose of the non-connected, floating regions of the opposed conduction type with

> respect to the shielding zone 13 is to shield the regions directly at the cathode side, that is to say directly under the base zone 6, in other words to prevent the course of the equipotential lines from reaching as far as the lower edge of the base zones 6. This achieves a high blocking strength in addition to a very small V_{CESat}." (underline added)

Thus, to achieve a high blocking strength and a small V_{CESat}, Hirler requires that p+ floating regions 15 have a depth "distinctly greater" than that of shielding zone 13. Since p-doped base zone 6 is fully embedded within shielding zone 13, then Hirler requires that p+ floating regions 15 have a greater depth than the embedded p-doped base zone 6. Thus, Hirler fails to teach or suggest two well regions that have substantially the same depth, as recited in applicants' claim 14. APA does not teach or suggest this feature of claim 14 either. Thus claim 14 distinguishes over Hirler and APA taken singly or in combination at least for the above reason.

Claims 15-20 and 32-33, which depend from claim 14, set forth additional features which further distinguish these claims from the cited references. For example, Hirler and APA fail to teach or suggest a transistor "wherein the impurity region abuts the first well region and the second well region," as recited in claim 33. Rather, as shown in FIG. 1 of Hirler and explained at col. 3, line 64 to col. 4, line 1, floating regions 15 are non-connected, or spatially separated from the lateral edges of shielding zone 13.

Thus, Claims 14-20 and 32-33 distinguish over the cited references at least for the reasons stated above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

/Barmak Sani/

Barmak Sani
Reg. No. 45,068

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
BXS:KBC:gjs

60971181 v1